

REMARKS

Applicants acknowledge receipt of a Non-Final Office Action dated June 20, 2006. In this response, Applicants have cancelled claims 5, 10, 15, 20 and 21 without prejudice or disclaimer. In addition, Applicants have amended claims 1, 6, 11, 16, and 22. Support for these amendments may be found in the specification, *inter alia*, at lines 1-4 on page 7.

After amending the claims as set forth above, claims 1, 3, 4, 6, 8, 9, 11, 13, 14, 16, 18, 19 and 22 are now pending in this application.

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and the remarks which follow.

Rejection Under 35 U.S.C. §112, 2nd Paragraph

On pages 2-3 of the Office Action, the PTO has rejected claim 21 under 35 U.S.C. §112, 2nd paragraph, noting that the phrase “the core part” lacked antecedent basis. In this response, Applicants have cancelled claim 21 without prejudice or disclaimer. Accordingly, the outstanding rejection under §112 is now moot.

Rejection Under 35 U.S.C. §102

On Page 3 of the Office Action, the PTO has rejected claim 21 under 35 U.S.C. 102(b) as allegedly being anticipated by JP Publication 2001-121285 to Shimizu *et al.* (hereafter “Shimizu”). In this response, Applicants have cancelled claim 21 without prejudice or disclaimer. Accordingly, the outstanding rejection under §102 based upon Shimizu is now moot.

Rejection Under 35 U.S.C. §103

On page 4 of the Office Action, the PTO has rejected claims 1, 3-6, 8-11, 13-16, and 18-22 under 35 U.S.C. §103(a) as allegedly being unpatentable over JP Publication 2002-283093 to Tadauchi *et al.* (hereafter “Tadauchi”). Applicants respectfully traverse this rejection for at least the reasons set forth below.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, prior art reference must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed modification and the reasonable expectation of success must both be found in the prior art, not in Applicants’ disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). See MPEP §2143.

Here, Tadauchi fails to teach or suggest that “the surface layer has a greater concentration of the additive element than the core part” as recited in each of independent claims 1, 6, 11, and 22.

Further, Applicants note that Tadauchi fails to teach or suggest “an average concentration of the additive element in the whole lead-free joining material is in a range of 0.6 % to 1.0 % by weight” as is also recited in each of independent claims 1, 6, 11, and 22. In accordance with the disclosure of Tadauchi, particularly paragraphs [0010], [0015]-[0016], the bismuth content of his alloy must go beyond about 1 wt%.

In addition, and with regard to the combination of “the surface layer has a greater concentration of the additive element than the core part” and “an average concentration of the additive element in the whole lead-free joining material is in a range of 0.6 % to 1.0 % by weight,” Applicants note that the average concentration regulates both the concentration in the surface layer and the size of the needle crystals dispersed in the solid-solution phase so that they fall within preferable ranges.

Applicants maintain the arguments set forth in the prior response and reserve the right to prepare and present comparative data in the future.

If an independent claim is nonobvious under §103, then any claim depending therefrom is nonobvious. *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988). See MPEP 2143.03. Thus, Applicants submit that claims 3, 4, 8, 9, 13, 14, 16, 18 and 19, which ultimately depend from one of independent claims 1, 6, 11, and 22, are also non-obvious.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the outstanding rejection under §103.

Conclusion

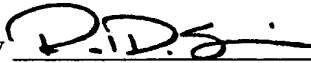
Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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By 

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